Fully Optimized: The (post)human art of speedrunning

Like their cognate forms of new media, the everyday ubiquity of video games in contemporary Western cultures is symptomatic of the always-already "(post)human" (Hayles 1999, 246) character of the mundane lifeworlds of those members of our species who live in such technologically saturated societies. This article therefore takes as its theoretical basis N. Katherine Hayles' proposal that our species presently inhabits an intermediary stage between being human and posthuman; that we are currently (post)human, engaged in a process of constantly becoming posthuman. In the space of an entirely unremarkable hour, we might very conceivably interface with our mobile phone in order to access and interpret GPS data, stream a newly released album of music, phone a family member who is physically separated from us by many miles, pass time playing a clicker game, and then absentmindedly catch up on breaking news from across the globe. In this context, video games are merely one cultural practice through which we regularly interface with technology, and hence, are merely one constituent aspect of the consummate inundation of technologies into the everyday lives of (post)humans. Nevertheless, the formalized nature of our species' interaction with video games renders the medium particularly indicative of the autopoetic manner via which contemporary (post)human subjectivity is mediated through technology more broadly. It is consequently significant that video games are not only the products of an incredibly lucrative industry, but also a major facet of contemporary popular culture.

Since the medium first emerged into arcades in the 1970s, video games have not only permeated and significantly transformed the landscape of popular culture, but have also become the object of sustained academic attention. The now well-established field of Game Studies continues to expand alongside the commercial successes of video game titles, yet despite the object of its enquiry, this field is rarely conversant with posthuman philosophy. In

her article “Automated State of Play”, Sonia Fizek notes that “[a]utomated play is a growing phenomenon . . . from idling gameworlds, seemingly autonomous NPCs, player-automated characters, to smart self-learning bots” (Fizek 2018), and she subsequently proposes that self-playing games have begun to instigate an alternative to the anthropocentric ideologies which govern both video game criticism and player cultures. Fizek accordingly proposes that there is a need for additional, thorough, and persistent work in the field of Game Studies to theoretically “rethink digital games and play, shying away from the purely anthropocentric perspectives according to which humans are the sole active subjects and the game a mouldable object of their desire”, since at present it still remains the case that the “proverbial state of play in how digital games are perceived and defined reveals a very binary worldview: an active human player versus an acted upon non-human game” (Fizek 2018). As Fizek implies, gaming practices which blur the boundary between the player and video game technologies deconstruct the humanist performance model, and so are appreciably (post)human.

Nonetheless, whilst it follows that with the advent of self-playing games, “the agential dimension of the machine becomes an ever more present part of gameplay” (Fizek 2018), the paradigm shift towards the posthuman model of gameplay identified by Fizek is problematised by the persistence of antithetical and stubbornly anthropocentric ideologies within player cultures. One gaming community which is centred upon such an anthropocentric ideal is the speedrunning community, which undertakes and facilitates a universalising mode of gameplay which is premised upon “the act and process of reaching a goal in a video game while intending to minimize interaction cycles between human and machine” (Koziel 2019, 24). More specifically, participants within the speedrunning community attempt to complete a given video game title in as fast a time as possible by repeatedly running the game from start to end. Their quickest discrete run—the apotheosis of

their repeated efforts at achieving a quick time through gameplay—is then subjected to peer review by the wider community. Once a run has been verified to certify its legitimacy, the time which the player achieved on the run—their personal best, or PB—is added to that particular video game title's ranked leaderboard on speedrun.com. The leaderboards of more popular titles are subdivided into categories, which may have different requisites for runs; such as requiring 100% completion,[1] avoiding any gameplay element which the community deems a glitch, or even requiring the player to play blindfolded.[2] Aside from peer reviewing the runs of others, the speedrunning community further engages in collaborative practices by researching, detailing, and sharing the optimal routes they have discovered, in order that fellow runners may utilise the corpus of the community's knowledge.

The community's totalising perception of speed as a teleology ensures that although individual speedrunners engage in competing for the quickest completion times within particular games, the speedrunning community in aggregate hypostatizes a collaborative attempt to complete the entire published canon of video games as expeditiously as possible. As Eric Koziel's assertation that speedrunning is based around a "measurable proficiency" metric on behalf of its player reveals (Koziel 2019, 87), the community conceives of the praxis as an egalitarian mode of competition between human players, within which the quantifiable value of speed serves an autotelic purpose. Hence, although Fizek presumes that the "digital and networked nature of the computer calls for a decentralised understanding of the player as an active agent" (Fizek 2018), at the level of discourse between participants, the speedrunning community instead reasserts a thoroughly humanistic model of agency in gameplay, which figures the video game as an entirely distinct totality from its player, and as a technological object which should be conquered as optimally as possible by the human agent. Yet, as I shall demonstrate, the performative aspect of speedrunning nonetheless reveals the distinctly (post)humanistic character of everyday life in Western societies.

Whereas Tanya Krzywinska and Douglas Brown assert that video game "players are interpellated through regimes of progress and predictability into a humanist rather than a posthumanist position" (Krzywinska and Brown 2015, 201), I will demonstrate that the performative creativity and artistic rigour which underpins speedrunning practices palpably disrupts the humanist separation between player and game, epitomizing the in-phenomenal and characteristically (post)human character of everyday life.

The ostensibly egalitarian and inclusive nature of speedrunning is problematized by the incapacious demographics of the players who choose to undertake the activity, who—despite the practice having a global audience—are almost exclusively white, male, Western, and able-bodied. Such a skewed demographic is not however unique to the speedrunning community, and is reflected not only in the majority of gaming cultures, but also by the gameplay objectives of many video games themselves. As Astrid Ensslin emphasises, "the gaming industry is (still) male-dominated, for which reason the needs of female gamers, designers and developers are often sidelined" (Ensslin 2012, 85), and as Anna Everett further affirms, the lack of character customisation options within the majority of video games functions to principally interpellate the "essential and privileged male gaming subject . . . who is "universalized" under the sign of whiteness" (Everett 2011, 312). To give just one example, racist and sexist ideologies are patent in two of Nintendo's highest grossing titles. In the decades since the inception of their respective series', Mario and Link have both perpetually engaged in periodic and recursive quests to rescue their princesses Peach and Zelda. Both these series have migrated from 2D to 3D graphics, had titles released on multiple video game systems, and played host to a range of fresh gameplay mechanics, but the object of their gameplay has failed to move beyond the misogynistic trope of the damsel in distress. Consequently, although it may ostensibly seem contrarian to claim that

speedrunning is in any sense a post-humanistic practice, this article argues that the activity of speedrunning may reasonably be considered to be an emerging (post)human art form.

If we presume that the 'essential feature in art is its power of perfecting existence, its production of perfection' (Nietzsche 1910, 263), then the endeavour of speedrunners to produce optimal gameplay through practice reveals an artistic pursuit of perfection which surpasses anthropocentric ideologies by situating the (post)human in intimate dialogue with technology. As the cultural sphere constantly metamorphoses, established artistic modalities are supplemented by new approaches, broadening customary definitions of what constitutes valid artistic practice. Consequent to such challenges, the conventionally defined boundaries of art undergo an act of redefinition. Consider two examples; in the 1950s the composer John Cage's postmodern composition *4′33″* interpellated its unwitting audience into the role of its instrument, and thereby invalidated presumptions of there being a rigid separation between works of art and their consumers; and more recently, in the late twentieth century, the rise to prominence of BioArt has problematised assumptions that our species' scientific pursuits have ever been distinct from our artistic endeavours.[3] This article will subsequently contend that, in an analogous manner to such prior artistic developments and movements, speedrunning can be conceived of as an artistic practice which refutes assumptions about both artistic performance, and the relationship between our species and technology in the artistic process. It will prove necessary to begin by situating this thesis in relation to the field of Game Studies, and in particular, the current literature on speedrunning.

The Death of the Developer

Although speedrunning has been practiced in some form since video gaming began, there is still "relatively little [academic] literature on speedrunning", which emblematises an "apparent deficiency in existing game scholarship" (Scully-Blaker 2014). Although Fanny

Barnabé (2016) and Koziel (2019) have both independently echoed fragmentary discussions within the speedrunning community itself by beginning to position speedrunning as a mode of performance art, in order to advance this as-yet-underdeveloped interpretation of the practice, it is necessary to emphasise the artistic character of the practice. In particular, in the majority of the academic literature that has been published to date on speedrunning, there is a pervading overemphasis upon the purportedly transgressive character of the practice (Scully-Blaker; Franklin; Barnabé 2015; Barnabé 2016). Seb Franklin, for instance, characterizes speedrunning as a means of playing "through the game in ways that are other than those intended at the design and programming stages" (Franklin 2009, 173). Franklin's emphasis on the thought processes of the game developer is highly extraneous, since it presumes that speedrunning is principally an attempt to play video games in a contrary manner to the way the developers intended, however, his conceptualization of speedrunning as a transgressive practice echoes the stance of numerous other theorists. In attempts to theorize speedrunning, the emphasis laid by Franklin and others upon the intentionality of video game developers is therefore problematic, since the notion of authorial intentionality is an obsolete and exceptionally dubitable philosophical paradigm.

In his 1967 article "*La mort de l'auteur*",[4] the structuralist critic Roland Barthes' contends that "The author is a modern figure" (Barthes 1977, 142), symptomatic of anthropocentric and humanistic modes of thought. Barthes thus concludes that the meaning of cultural texts is polysemic, and exists independently of the historical context and convictions of their authors. Since textual meaning is formed subjectively, it is self-defeating to attempt to determine the character of the author or developer's intentions at the time of producing a text or game, and the notion of reading—or playing—contrarily to authorial intent is therefore founded on a fundamentally erroneous supposition from the outset. Rather than a deliberate act of transgression, speedrunning must instead be considered a manifestation of

the immersive cognitive state which Mihaly Csikszentmihalyi terms flow; the "[e]njoyment [which] appears at the boundary between boredom and anxiety, when the challenges are just balanced with the person's capacity to act" (Csikszentmihalyi 2002, 52). Speedrunning performances accordingly manifest a creative synthesis—showcasing the speedrunner's habitualization to their in-phenomenal means of interaction with the technological apparatus. Therefore, speedrunning is not a transgressive act, but a performance of technologically embodied creativity.

By having presumed that the developers of video games retain authority over their texts, and hence that gameplay must proceed with either a normative or a transgressive proclivity, speedrunning criticism has frequently failed to recognize the vital importance of the technological aspect of the practice. It is therefore necessary for this article to move beyond the prevalent yet demonstrably facile discussions of whether speedrunning is a subversive activity or not, and to instead formulate a post-humanistic theory of the practice. We must, as it were, theoretically suppose the death of the developer. I by no means intend to imply, however, that the practice of speedrunning should be theorized through a narratological lens—such an approach would prove greatly reductive to understandings of the practice. As Paweł Frelik emphasises, when narratological methodologies are applied within the field of Game Studies, they are indicative of a "compulsion to see video games as a new frontier of storytelling, [which] however, remains at odds with the character of digital visual culture" (Frelik 2014, 227). Whilst Narratology "seeks to identify in [video games] both the continuation of traditional narrative strategies and their permutations, affected by the constraints and affordances of these new forms" (Frelik 2014, 227), video games are a distinct and innovative form of medium. Although video games make use of "narrative and thematics", they are more acutely "concerned with simulation and participation" (Frelik 2014, 228), and thus, if their artistic integrity is to be conceptualised adequately, both video

games and speedrunning practices must be analysed in terms which acknowledge their technological fundament. This is best achieved via a ludological approach, which, by foregrounding the significance of practiced gameplay, emphasises the aspects by which speedrunning is a distinctive and emergent performative practice.

As Hayles asserts, when in assemblage with new media such as video games, the (post)human's "involvement extends beyond cerebral to affective and bodily engagements" (Hayles 2010, 99), and so the player enters what we may designate a technological/(post)human assemblage, within which both parties are augmented for the duration of their interaction. Accordingly, as Ensslin theorises, (post)human players "interact with videogame content in highly individualised, multilinear ways which are never exactly the same from one person to the next" (Ensslin 2012, 122), and so the semantic character of each assemblage formed between a given player and video game is phenomenologically unique to a greater extent than their interaction with a book, or film, could be. The player therefore implicitly gains agency through interfacing with the video game medium, as the sequence of gameplay events in the majority of modern games are only partially fixed, and thus large portions of titles are agentially contingent. Thus, in a tangible manifestation of how "the complex dynamics between the body and the machine entwine together to codetermine our situation" as (post)humans living in technologized lifeworlds (Hayles 2010, 120), the player gains a relatively increased level of agency in the assemblage when interfacing with a video game.

Barnabé recognises the highly collective nature of speedrunning communities when she contends that, rather than "being defined as an inspired creator and owner of his work, the author of a *speedrun* is therefore more like the *performer* of a script whose development does not entirely belong to him" (Barnabé 2016).[5] Nevertheless, her model is still based on a model of human subjectivity, which implicitly presupposes that the player's agency is

absolute, and denies the distinctive role of the technological/(post)human assemblage within the practice. Likewise, although Koziel suggests that the definitive purpose of speedrunning is seeing "what humans [a]re capable of in" a given game (Koziel 2019, 16), an acknowledgement of the role of the video game technology itself must be added to this equation—specifically in terms of the manner in which the player intra-acts with it. As video game technologies palpably transform (post)human agency, speedrunning can instead be defined in posthuman terms as *the co-constitutive practice of playing a video game quickly, taken to the level of expertise*. Now that I have offered a redefinition of the practice, it will next be necessary to explicate the nuances of the posthuman aspect of speedrunning in greater detail. As the speedrunning community is comprised of a remotely networked and constantly shifting multiplicity of players and technologies, it proves conducive for this thesis to ground its theoretical analysis by analysing the gameplay mechanics and speedrunning practice of one specific video game, which can be taken as synecdochal of the practice more broadly.

Speedrunning & *Super Mario Odyssey*

Released in 2017 on the Nintendo Switch, *Super Mario Odyssey*[6] is the second most recent entry in Nintendo's successful Super Mario series, and the second most speedrun video game title of all time, with over 11,000 complete runs of the game listed on speedrun.com (Speedrun.com 2019). Speedruns of *Odyssey* use a RTA timing principle,[7] which counts time from the moment at which the player presses start on the game's title screen until the "last meaningful action" the player can undertake (Koziel 2019, 34)—which *Odyssey's* speedrunning community has determined to be the moment Mario and Cappy capture a spark pylon and exit the "pillars" room in Moon Kingdom. As a result of the RTA (Real-Time Attack) timing standard,[8] the time elapsed during the game's last cutscene is discounted, as it proceeds automatically with or without the player providing inputs through the Switch

controllers. The final action the player must undertake to complete a run is therefore consistent across every Any% speedrun of *Odyssey*, and involves the title's pivotal gameplay mechanic. Namely, *Odyssey* is the first game in the *Super Mario* series to introduce the sentient companion Cappy, who replaces Mario's familiar cap throughout the narrative of the game. Cappy accompanies Mario as he travels between kingdoms, and together they collect power moons to power the game's eponymous airship, in order to rescue Peach and Cappy's sister Tiara from Bowser's clutches. Cappy's introduction allows the player of *Odyssey* to utilise its capture mechanic, via which Mario is able to enter and gain direct control of many enemies he encounters by throwing Cappy atop their heads. Mario is also able to use Cappy to manipulate many inanimate objects he encounters, and by bouncing off it, he can gain height and jump far further and higher than he would ordinarily be able to.

Karen Barad notes that the "*ontological inseparability of agentially intra-acting "components."*" such as the game and its player produces an assemblage between the two which is intensely mutually informative (Barad 2003, 815. Emphasis in original). Barad therefore argues that it is greatly reductive for a dichotomy between the human and nonhuman to "be hardwired into any theory that claims to take account of matter in the fullness of its historicity" (Barad 2003, 827). Hence, the interrelatedness of networked phenomena must be acknowledged, and intra-active assemblages must be presumed to be "in-phenomena" (Barad 2003, 817), rather than distinct entities throughout the duration of their interaction. Furthermore, as Susan Kozel suggests, our species' rapport with technology in contemporaneity is extensive enough that "the contours of our own extended bodies" can, in pragmatic terms, be "found in our technologies" (Kozel 2007, 99). In this light, Barad's notion of in-phenomena assemblages can be seen to problematise a broad range of theories of embodiment which presume our species' bodies to be hermetically sealed vessels, and thus the sole realm of (post)human cognitive processes. Rather, technological/(post)human

assemblages provoke a flexible process of embodied outsourcing—of cognition, sensory inputs, memory, and so forth. As such, in *Odyssey* Mario and Cappy's intra-active relationship forms a salient metaphor for the co-constitutive means of interaction which is materialised between the player and the video game title through the process of playing. Since a given (post)human player engages with the video game in an embodied manner, within her and the game's mutual association in gameplay each of their agencies are distributed omnidirectionally.

Hence, *Odyssey* operates through an in-phenomena model which is both implicitly and explicitly realised (respectively; through gameplay, and through Cappy's capture mechanism). Fittingly, the most optimal speedruns of *Odyssey* are the runs which use Cappy most advantageously, and hence the quickest speedruns of the title are those which involve the (post)human player recurrently choosing to enter an intra-active assemblage not only in embodied terms, but also in aesthetic terms. Gameplay of *Odyssey* therefore literalises Hayles' supposition that technology and (post)humans are engaged in a pervasive "coevolutionary spiral" (Hayles 2010, 114), as we have been since our species first developed tool technologies. As Hayles emphasises, "Embodiment will not become obsolete because it is essential to human being, but it can and does transform in relation to environmental selective pressures, particularly through interactions with technology." (Hayles 2010, 104). When speedrunners playing as Mario bounce off Cappy to access areas within the game's world that would be otherwise inaccessible, the two avatars metaphorically become "body and machine in open-ended recursivity with one another", and both Mario and Cappy gain the collective ability to achieve feats beyond their individual abilities "as each partner in the loop initiates and reacts to changes in the other" (Hayles 2010, 130). Likewise, when playing *Odyssey*, the embodied positionality of any given speedrunner is constantly reconfigured

through her in-phenomena interaction with the video game technology, which allows her to complete feats beyond her abilities outside of the technological/(post)human assemblage.

It is therefore appropriate that video game players "do not regard their avatars . . . as mere representations or empty animations [and] inhabit their avatars much like they inhabit their own body . . . within minutes of controlling an avatar" (Besmer 2015, 57); the process of playing a video game such as *Odyssey* is a spatially proprioceptive means of perception to the degree that the controller and the avatar it controls temporarily become an extension of the player's corporeal body. As Kirk M. Besmer indicates, however, the player "must become familiar enough with the bodily co-located interface equipment so that it withdraws from focal awareness, becoming integrated into the prepersonal body schema" (Besmer 2015, 67) in order for this proprioceptive relationship to become entirely practical and instinctual. Hence, in order to speedrun the digital environment of *Odyssey* optimally, players must undergo an extended period of training and practice that is situated in the realm of physicality. Since this rigorous means of gameplay literally comprises the enactment of an in-phenomena interaction between the video game and its player, this is no contradiction, but merely a demonstration of the extent to which (post)human materiality is always-already determined by our relationships with technologies.

Embodied Optimization

At the time this article was written, the quickest run of the Any% category of *Odyssey* speedrunning was by the runner Tyron18, and was completed on the 14th of October 2019, with a time of fifty-eight minutes and forty-seven seconds.[9] To attain this high level of proficiency with the game, as another top runner estimates, it takes approximately "four to four and a half thousand hours" of gameplay (NicroVeda 2019). Given that even the lower bound of this estimate cumulatively equates to more than 160 full days of gameplay, the

process by which a player improves at speedrunning is unmistakably grounded painstakingly in embodied practice. Importantly, the immense amount of practice which allows a player to perform an optimal run is undertaken through the enlistment of an extensive range of sensory stimuli to the technological/(post)human assemblage. Aside from the haptic stimuli which result from the player's manipulation of the Switch controller(s), neurochemical interactions involving endorphins and adrenaline are activated at the most intense stages of each run (Koziel 2019, 26), foot pedals allow players to perform hands-free splits,[10] and the game's soundtrack "modulate[s] activity in brain structures commonly associated with the limbic system that are known to be involved in emotion, such as the amygdala, the hypothalamus, and the hippocampus" (Hodent 2018, 158). Consequently, the speedrunner's whole body is involved in the process of performing the most optimized speedruns, and the practice of speedrunning is therefore just as embodied as it is digital.[11]

As is common to (post)human learning processes, the physical proficiency which a given speedrunner gains from her persistent practice exists within a continuous feedback loop with her cognitive experience of the practice. As an activity which has been studied theoretically is practiced, "[g]radually control is transferred from the cognitive to the motor system" (Loftus and Loftus 1983, 67), and the cognitive system correspondingly begins to forget how to perform the activity autonomously of the motor system. Hence, we are most often capable of performing better at familiar tasks involving skill when we perform them subconsciously, and whilst our conscious thought processes are otherwise engaged. Hayles refers to this cognitive learning process as "cerebral plasticity" (Hayles 2010, 129), in order to emphasise that the (post)human brain is—in this sense—analogous to a computer whose memory can literally be programmed and reprogrammed. Therefore, "by repeating the contents of short-term memory over and over to ourselves . . . we can keep it in short-term memory indefinitely" (Loftus and Loftus 1983, 51), and the longer a person rehearses this

information, “the better it will be entered into long-term memory” (Loftus and Loftus 1983, 52). Hence, speedrunners endeavour to practice the same actions and sequences repeatedly in order to gradually program the entire route for the video game they are speedrunning into their long-term memory, where it will then remain almost indefinitely.

The necessity of performing optimally for *Odyssey* speedrunners is particularly apparent, given that the game has long been optimized to the extent that saving a handful of seconds in terms of gameplay can easily make the difference between setting a world record and (yet another) failure (see Table 1).[12]

<Table 1>

As the data set demonstrates, the Any% world records which have been set in *Odyssey* since its release have followed a logarithmic distribution, wherein all statistically significant optimizations in speed had already plateaued almost entirely within the first two months of the game’s release (see Figure 1).

<Figure 1>

Since this point—other than in sporadic instances where new routing discoveries have been made—the game’s top speedrunners have only been capable of improving their personal best times by increasingly incremental degrees through perfecting their performance of the recognized optimal route. By repeatedly practicing the same route, runners’ motor systems become specialised to performing the required sequence of controller inputs, which generates muscle memory of the route. At this point, the player is capable of entering a state of automaticity when performing the speedrun, since they now retain long-term memory of the

optimal sequence to execute within the technological/(post)human assemblage. This transference—of memory of the assemblage into the player's cerebral plasticity—pertinently demonstrates that the optimization processes of speedrunning do not merely occur in routing processes, but also effectively occur within the speedrunner's subjective cognitive processes.

This same process of rote learning also characterises the (post)human's everyday relationship to a range of technologies. Torben Grodal states that:

In several aspects, video games provide an *aesthetic of repetition*, similar to that of everyday life . . . we repeat the same actions over and over in order to gain mastery. . . . The video game experience is very much similar to such an everyday experience of learning and controlling by repetitive rehearsal. (Grodal 2003, 148)

Speedrunning thus exacerbates the mundane fundament of the act of gaming to an even greater extent, and thereby vicariously demonstrates the video game's everyday situatededness in non-novel (post)human experience. Consequently, although Koziel characterises speedrunning as a "mental arms race" (Koziel 2019, 14)—an aggressive attempt to colonise the novelty of any given game—the practice can alternately be interpreted as a demonstration of the near ubiquitous presence of technological/(post)human interfaces in the contemporary social sphere. Subsequently, as Grodal asserts, the attainment of mastery in video games involves both "explicitly or intuitively learning the . . . constraints and the optimal strategies of a given game world", and yet, "when we gain mastery we may not only experience the game as a series of routes that we may follow but also . . . realize that we have a set of limited options" (Grodal 2003, 150;144). Hence the speedrunner's specially rigorous familiarity with the video game title can be assumed to diminish her experience of intra-activity with it; the more she plays, the more it becomes increasingly apparent that only a

minute range of the agential possibilities within the gameworld will ever be optimal, due to the preset nature of the game's programming.[13] Perversely therefore, as the speedrunner continues to improve at a given video game, they feel less immersed in its diegetic world, and hence less of an actor within the in-phenomena assemblage materialised by their co-constitutive gameplay. We may now return to this article's thesis, and begin to characterize this practice of embodied optimization as a form of (post)human performance art.

Speedrunning as Performance

Although the origins of speedrunning can be traced back as far as the 1980s, the practice became widespread in 2011, following the launch of the online steaming service Twitch.tv, which provided a suitable platform for the effective dissemination of live streams of runs. As Koziel stresses, the advent of streaming profoundly "changed speedrunning as an activity" (Koziel 2019, 116), and contemporary versions of the practice can therefore be considered a subset of the Internet 2.0 phenomenon. Although speedrunning was initially an isolated practice, it now became a journey which could be shared with viewers, and accordingly, a form of digital performance art—a demonstration of "performance's fluctuating meaning" (Salter 2010, 23) in our technologically saturated lifeworld. Although the number "of active speedrunners in the world right now probably lies in the thousands to tens of thousands" (Koziel 2019, 64), viewers-wise, the practice attracts an audience "in the hundreds of thousands to millions" (Koziel 2019, 65). As is implied by the 100:1 ratio of viewers to content producers which Koziel suggests, contemporary speedrunning can be considered a form of digital performance art in which the player "becomes the performer her/himself and in doing so becomes the title, the work itself by engaging with, or bringing into life, the work" (Whatley 2015, 89).

Hence, in the age of streaming, speedruns are performed with the express purpose of being rewatched by others, and the practice accordingly "moves from "play" in the playful sense to "play" in the theatrical sense" (Barnabé 2015),[14] thus becoming inherently performative—a live demonstration of the intricacies and engagements of a technological/(post)human assemblage. This in-phenomena mode of performance evokes Chris Salter's conception that technology "does something in and to the world by modifying existing relations and constructing new ones between humans, tools, processes and the environment in which all are deeply entangled" (Salter 2010, 35), as in recordings of runs the presumed separation between (post)human and video game becomes indistinct to the extent that the binary is no longer an applicable means of representing gameplay. As a mode of performance art, speedrunning is, as Rainforest Scully-Blaker suggests, "a form of *practiced practice*, both in the sense that [runs take] many hours of training but also in the sense that [the] approach . . . is so efficiently streamlined that it becomes a new practice unto itself." (Scully-Blaker 2014). Therefore, although successful runs are the culmination of many hours of practice, the embodied optimization which underlies the activity more broadly dramatizes our species' corporeal situation, and hence that "one cannot "shift out" of one's carnal body. It is a permanent anchor of one's embodied situation." (Besmer 2015, 69).

Since in the process of gaming, "players are integrated in what is called a cybernetic feedback loop . . . which links them with the surrounding hardware and software, thus enabling a complex quasi-self-regulatory interplay of stimuli and responses." (Ensslin 2012, 125), speedrunning is akin to a dance performed not only using, but alongside technology, which becomes an equal partner in the creation of a live choreography. For Sarah Whatley, "the intersection between the dancing body and digital technology, or the intermediate zone where virtual and physical meet, produces new kinds of performative events that can only exist in their becoming" (Whatley 2015, 96), and this perfectly characterizes the ephemeral

yet recursive nature of speedrunning, which is predominantly "a dance in simulated yet somehow tangible physical worlds" (Salter 2010, 268). If in our technological lifeworld, performance is constantly "moving towards the image of the Mobius strip, in which the inside workings of the choreographic process and the outside manifestation of 'choreography' fold back into each other" (Whatley 2015, 95), speedrunning demonstrates that the distinction between practice and performance becomes irrelevant in an age when content can be streamed across the globe at the tap of a finger. Hence, this artistic model fundamentally problematizes the pervading notion in the field of Game Studies that gameplay involves entering a "magic circle" (Huizinga 1955, 18), whereby the player steps out of real life, and into a distinct virtualised environment. As demonstrated by both the embodied situation of the player, and the intra-active nature of the technology they enter into an in-phenomena assemblage with, Huizinga's influential concept has become a patent oversimplification in the contemporary world.

Subsequently, via its implicit emphasis on incremental optimisation, which is achieved through repeated performance and frequently characterized by failure, speedrunning dramatises the falsity of conceptualisations of gaming as a discrete and exclusive sphere of (post)human mentality. Just as "extensive video gaming experience appears to be causally related to enhancements in visual attention" (Schmidt, et al. 2019, 430), the speedrunner's ability to perform better by incremental degrees is subject to their undertaking of a gradual process of learning to play, yet failing to perform sufficiently, that is firmly rooted and acted out in the sphere of their embodied existence. Crucially, the player's repeated failure to perform sufficiently whilst in-phenomena with the video game becomes a prominent aspect of speedrunning's performance medium, through the invariable streaming of a multitude of runs which fail, and which therefore require the speedrunner to reset, then begin again. Failed runs are necessarily indistinguishable from successful runs until the point of completion of

the latter, and hence there is a characteristic indeterminancy to the speedrunning performance until its very conclusion. Hence, failed runs encompass just as much artistic verisimilitude as successful ones, figuratively demonstrating that the pursuit of optimisation is hard won, and inescapably embodied. Speedrunning may therefore be considered a form of posthuman performance art, and specifically, a form of performance art which problematises a number of traditional assumptions about art, by demonstrating practice constantly bleeding into performance.

Conclusion

Salter states that:

> the estrangement of daily life's routines that long was the territory of artists is now in the hands of everyday people who, in their attempt to elevate the workaday to the status of the fantastic, upload videos of their daily cooking and cleaning rituals, going to church and taking out the trash on YouTube, like so many home movies, hoping to achieve the millisecond attention of our increasingly saturated eyes. (Salter 2010, 352)

Likewise, the performative aspect of speedrunning converts the player's habitualised phenomenological perspective of the game at their high skill level into an artistic statement for an audience of thousands. The process of speedrunning implicitly involves an acceptance that video game titles such as *Super Mario Odyssey* will gradually become banal to the player—much like any other technological aspect of the contemporary Western lifeworld—and enacts a performance of them becoming so. Nevertheless, in relation to Fizek's assertation that video "games by their very nature break down the subject-object, organic-inorganic, and player-game dichotomies" (Fizek 2018), further research is required in order

to determine to what extent the ideologies and praxis of gamers beyond the speedrunning community either acquiesce to or challenge humanistic models of gameplay. Additionally, although a discussion of TAS (Tool-Assisted Speedrun) practices lies beyond the scope of this article, subsequent studies would benefit from reflecting on the extent to which TAS runs may be seen to remodel the balance of the intra-active relationship between video game and (post)human player that comprises the core of speedrunning's artistic fundament,[15] particularly in light of the well-known antipathy of speedrunning communities towards TASs.

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1. In contrast to the standard Any% category, in which the object of gameplay is to reach the end credits as quickly as possible, regardless of which of the title's objectives are completed along the way.

2. This latter type of category is implicitly ableist, since it presumes that all speedrunners share a normative degree of vision.

3. For a comprehensive history of the medium of BioArt to date, see Myers 2015.

4. English: "The Death of the Author".

5. French: "Loin de se définir comme un créateur inspiré et propriétaire de son oeuvre, l'auteur de *speedrun* se présente donc davantage comme le *performer* d'un script dont l'élaboration ne lui revient pas entièrement". Translation mine.

6. Henceforth, *Odyssey*.

7. RTA is the most popular timing method for speedruns.

8. Speedruns of the *Odyssey* must conform to the RTA timing standard in order to be verified and thus accepted by the community.

9. For a cinematic guide to the *Odyssey* Any% world record progression, see Smallant1 2019.

10. Splits allow speedrunners to gauge their current pace within a run against their PB and/or world record pace.

11. The incredibly difficult Any% Minimum Captures subcategory—which requires players to avoid using Cappy to capture objects and enemies unless progress within the gameworld is otherwise impossible—takes this bodily engagement a step further. At present, Smallant1 and Ofir871 are the only players to have completed verified runs of the category. At one remarkable point in Cascade Kingdom, in order to reach a power moon which is virtually inaccessible prior to completion of the game, this route necessitates that players make inputs on one Switch controller with their feet at the same time as they make inputs with another controller using their hands.

12. It would nonetheless take an immense amount of practice for a novice *Odyssey* speedrunner to merely be capable of approaching world record pace in the title.

13. The player usually cannot change the larger overriding causal structure of video games. Two notable exceptions to this hegemonic trend are Nintendo's *Super Mario Maker* series and—to an even greater extent—the 2020 video game *Dreams*, which provides a platform for players to create their own games within its operating system.

14. French: "On passe donc ici du «jeu» au sens ludique au «jeu» au sens théâtral". Translation mine.

15. According to Koziel, TAS runs enter the “realm of theoretical perfection” (Koziel 2019, 58) since they “use emulators, precise control of inputs, save states, and introspection of system resources to construct a theoretically perfect run” (Koziel 2019, 97).

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